

Notice of Allowability

Application No.

10/779,897

Examiner

Deborah Yee

Applicant(s)

YAZAWA ET AL.

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment and remarks submitted 7-15-05.
2. ☒ The allowed claim(s) is/are 9-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/047,900.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application:

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2-17-04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Deborah Yee
Primary Examiner
Art Unit: 1742

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 10, line 3, "3.3MO" has been changed to --3.3Mo-- to correct typographical error.

Page 7, paragraph [0019], line 2, "3.3MO" has been changed to --3.3Mo--.

In line 1 on page 1, "BACKGROUND OF THE IVENTION" has been changed to -
--BACKGROUND OF THE INVENTION:--

Also page 1 of the specification before "BACKGROUND OF THE INVENTION", the following has been inserted: --This application is a Divisional of 10/047,900 filed January 14, 2002, now U.S. Patent No. 6,733,601 issued May 17, 2004.--

Allowable Subject Matter

1. Claims 9 to 26 are allowed.
2. The following is an examiner's statement of reasons for allowance: The art of record does not teach or fairly suggest the method for making a ferritic stainless steel sheet comprising the steps of preparing a steel alloy slab having a composition, as claimed, to heating at 1,000 to 1,200C, hot-rough rolling the steel slab at a rolling

Art Unit: 1742

temperature of at least one pass of about 850 to about 1,100C by a reduction of about 35%/ pass or more, hot finish rolling at a rolling temperature of at least one pass of about 650 to about 900C by a reduction of about 20 to about 40%/pass to prepare a hot-rolled sheet, annealing at about 800 to 1,100C, cold rolling the resulting annealed sheet at least twice with intermediate annealing there between, said cold rolling being performed at a gross reduction of about 75% or more and a reduction ratio (reduction in the first cold rolling)/(reduction in the final cold rolling) in the range of about 0.7 to 1.3, and finish annealing at about 850 to 1,050C, and a further optional step of bake-coating the finish-annealed ferritic stainless steel sheet with a lubricant coat comprising an acrylic resin, calcium stearate, and polyethylene wax in a coating amount of about 0.5 to about 4.0 g/mm².

3. More specifically, the prior art of record does not teach or fairly suggest the claimed multiple steps of cold rolling wherein cold rolling is performed at least twice with intermediate annealing to achieve a gross reduction of about 75% or more with a cold rolling reduction ratio (reduction in the first cold rolling)/(reduction in the final cold rolling) in the range of about 0.7 to 1.3. Applicant has discovered that claimed multiple cold - rolling step limitations are critical to control the (222)/(200) X-ray intensity ratio to not less than 15 and to promote the development of the {111} aggregated structure in order to achieve a ferritic stainless steel sheet having a high r- value of not less than 2.0 and remarkably improved deep drawability and workability. Criticality of cold rolling limitations are explained in paragraphs 62 to 68 in applicant's specification. Moreover, comparative test data is disclosed in Tables 2 to 4 on pages 30 to 33 of applicant's

Art Unit: 1742

specification to demonstrate criticality of the claimed cold rolling reduction ratio of 0.7 to 1.3. Note comparative examples 11 and 12 have reduction ratios of 0.69 and 1.34 slightly outside the claimed range of 0.7 to 1.3, and exhibit inferior drawability properties with r values at 1.9, and maximum ridging height of 13 and 15, respectively.

4. The newly unapplied prior art has been cited to further depict the state of the art in the process of making ferritic stainless steel sheet.

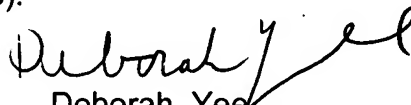
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Deborah Yee
Primary Examiner
Art Unit 1742

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